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Human Papillomavirus (HPV)
The Virus and the Vaccine

January 5, 2007

What You Should Know

- Human papillomavirus (HPV) is very prevalent in the United States. Approximately 20 million people are currently infected with HPV, and at least 50 percent of sexually active men and women acquire genital HPV infection at some point in their lives. About one million sexually active adults in the U.S. have visible genital warts at any point in time. However, most infections are asymptomatic which means that people do not know they are infected yet they can still transmit the virus to a sex partner.

- Of the over 100 strains of HPV, more than 30 are sexually transmitted and can cause genital HPV infection. Some of the viruses causing genital HPV infection are "low risk types" and can cause genital warts or mild Pap test abnormalities. "High risk" types can cause abnormal Pap tests and may also lead to genital cancers. Persistent infection with "high-risk" types of HPV is the main risk factor for cervical cancer.

- Cervical cancer is the second most common cancer in women, worldwide. In the U.S. as well as Michigan, rates of cervical cancer, as well as mortality caused by cervical cancer, are higher for African American and Hispanic women, when compared with white women. See Facts about Cervical Cancer in Michigan http://www.michigan.gov/documents/CervicalFacts_6648_7.pdf.

- Approximately 10 of the 30 identified genital HPV types can lead, in rare cases, to development of cervical cancer. In June, the U.S. Food and Drug Administration approved a new vaccine against 4 strains of human papillomavirus (HPV4). The vaccine, Gardasil®, is manufactured by Merck and is licensed for use in females ages 9-26 years. Current studies are being done on the vaccine in males. Another HPV vaccine is under review, but is not yet licensed. This vaccine would protect against two strains of HPV that cause most cervical cancer.

- HPV4 has been found to be 100% effective in preventing cervical pre-cancers caused by the targeted HPV types. It has also been found to be almost 100% effective in preventing pre-cancers of the vulva and vagina, and genital warts that are caused by the targeted HPV types.

- Provisional Recommendations for the use of HPV4 vaccine were posted on August 14, 2006 and can be found at http://www.cdc.gov/nip/recs/provisional_recs/hpv.pdf.

- The Advisory Committee on Immunization Practices (ACIP) recommendations for HPV4 include:
    - routine vaccination for 11-12 year-old girls
    - catch-up vaccination for 13-26 year-old females
    - girls age 9-10 may receive the vaccine at provider discretion

- While the impact of an effective HPV vaccine on cervical cancer rates may not be realized for decades (since cervical cancer takes many years to develop), the impact of this vaccine on cervical cancer precursors (abnormal Pap test results) and genital warts may be realized sooner.

- HPV4 vaccine has been tested in over 20,541 females (ages 16-26 years) in many countries around the world. There appear to be no serious side effects. The most common side effect is brief soreness at the injection site. There is no thimerosal or mercury in the vaccine. This vaccine is made up of proteins from the outer coat of the virus (HPV).

- HPV4 vaccine should be delivered through a series of three IM (intramuscular) injections over a six-month period (at 0, 2, and 6 months). It may be given with other vaccines.

- Although an effective vaccine is a major advance in the prevention of genital HPV and cervical cancer, it will not replace other prevention strategies, such as cervical cancer screening for women or protective sexual behaviors.

- Pap tests will remain an important weapon in our arsenal against cervical cancer. Even if 100 percent vaccine coverage is achieved, the current HPV vaccine will not eliminate the need to continue cervical cancer screening in the United States because about 30 percent of cervical cancers are caused by viruses not in the current vaccine.

- For more information, see www.cdc.gov/nip or www.cdc.gov/std/hpv.